

Translation

PATENT COOPERATION TREATY

PCT/JP2003/008916



# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TO114PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/008916	International filing date (day/month/year) 14 July 2003 (14.07.2003)	Priority date (day/month/year) 15 July 2002 (15.07.2002)
International Patent Classification (IPC) or national classification and IPC G02B 6/38		
Applicant TOMOEGAWA PAPER CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 14 July 2003 (14.07.2003)	Date of completion of this report 14 January 2004 (14.01.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
pages 1-21, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages 2, 6, 7, 9, 12-16, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages 1, 3-5, 8, 10-11, filed with the letter of 25 December 2003 (25.12.2003)
- ☒ the drawings:  
pages 1-39, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The "special technical feature" of claims 1-9 and 11-16 relate to "plugs, each having an optical fiber inserted in it, are installed into an adaptor in the direction perpendicular to the axial direction of the optical fibers." The "special technical feature" of claim 10 relates to "after the plugs have been installed in the adaptor, guide pins are inserted from through holes of the adaptor into through holes of the plugs."

Since there is no technical relationship among these inventions involving one or more of the same or corresponding technical features, these inventions are not considered to be so linked as to form a single general inventive concept.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	2, 4-10, 12-13, 15-16	YES
	Claims	1, 3, 11, 14	NO
Inventive step (IS)	Claims	5-7, 12-13, 15	YES
	Claims	1-4, 8-11, 14, 16	NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

### 2. Citations and explanations

Document 1: JP, 59-157605, A (Fujitsu Ltd.), 7 September, 1984 (07.09.84), full text, all drawings  
 Document 2: JP, 3-60402, B2 (Fujitsu Ltd.), 13 September, 1991 (13.09.91), full text, all drawings  
 Document 3: JP, 1-51808, B2 (Fujitsu Ltd.), 6 November, 1989 (06.11.89), page 2, left column, line 22 to page 2, right column, line 18, Fig. 2  
 Document 4: JP, 6-222245, A (Sumitomo Electric Industries, Ltd.), 12 August, 1994 (12.08.94), full text, all drawings  
 Document 5: US, 5838856, A (Daewoo Telecom, Ltd.), 17 November, 1998 (17.11.98), column 3, lines 21-31, column 3, lines 44-53, column 3, line 62 to column 4, line 14, Figs. 3, 4, 9, 11 and 12

#### Claims 1, 3 and 11

The "aligning member 12" of the invention described in document 1 corresponds to the "plug" of the subject matters of claims 1, 3 and 11. Furthermore, the "aligning board 6" and "optical fiber aligning board 4" of the invention described in document 3 respectively correspond to the "adaptor" and "plug" of the subject matters of claims 1, 3 and 11. In the inventions described in documents 1-3, two plugs can be individually installed into an adaptor in the direction perpendicular to the axial direction of optical fibers. So, the subject matters of claims 1, 3 and 11 do not appear to be novel in view of documents 1-3.

#### Claims 2, 8 and 9

The subject matters of claims 2, 8 and 9 do not appear to involve an inventive step in view of documents 1-3. Since the fixing by means of latches is well-known and commonly used, a person skilled in the art could have easily conceived of fixing the plugs to the adaptor by means of latches.

#### Claims 4 and 10

The subject matters of claims 4 and 10 are different from the inventions described in documents 1-3 in the following constitution. In the former, after the plugs have been installed in the adaptor, the guide pins are inserted from the through holes of the adaptor into the through holes of the plug, for fixing the plugs to the adaptor. However, in the latter, such guide pins are not used.

Document 4 describes that guide pins (pressure pins 15) are inserted from through holes of an adaptor (housing 11) into through holes of plugs (optical connectors 22), for fixing the plugs to the adaptor. A person skilled in the art could have easily conceived of applying the above-mentioned matter of document 4 to the inventions described in documents 1-3, to arrive at the subject matters of claims 4 and 10.

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## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of : V.2

### Claim 14

The "alignment member" described in document 5 corresponds to the "ferrule aligning member" of the subject matter of claim 14. Since the invention described in document 5 has all the steps described in claim 14, the subject matter of claim 14 does not appear to be novel in view of document 5.

### Claim 16

A plug having plural ferrules is employed as required, and a person skilled in the art could have easily conceived of it.

### Claims 5-7

The subject matters of claims 5-7 appear to involve an inventive step in view of documents 1-5. Documents 1-5 do not describe an optical fiber connecting structure in which two plugs can be individually installed into an adaptor in the direction perpendicular to the axial direction of optical fibers, characterized in that after the plugs have been installed into the adaptor, a ferrule aligning member is made to be capable of sliding relative to the ferrules of the plugs. A person skilled in the art could not have easily conceived of this constitution either.

### Claims 12 and 13

The subject matters of claims 12 and 13 appear to involve an inventive step in view of documents 1-5. Documents 1-5 do not describe that after a guide pin has been inserted into through holes of respective plugs, (1) the respective plugs are disposed to face each other, and (2) another guide pin is inserted into a through hole of an adaptor from one end of the adaptor, for pressing in the guide pin inserted beforehand, thereby fixing the plugs to the adaptor. A person skilled in the art could not have easily conceived of this constitution either.

### Claim 15

The subject matter of claim 15 appears to involve an inventive step in view of documents 1-5. Documents 1-5 do not describe the constitution in which a ferrule aligning member is installed in an adaptor beforehand. A person skilled in the art could not have easily conceived of this constitution either.